Horse Science

Horse science is designed to develop basic understanding of equine handling, health, maintenance, reproduction, selection and management. Horse populations in the state have continued to grow and their economic impact has increased with this growth. This course is designed to help students prepare for the social and economic impact equine science will have in the 21st century.

Pre-requisites: **None**

Recommended Credit: **½ or 1**

Recommended Grade Levels: **10th, 11th or 12th**

***** **½ denotes learning expectations that must be met when teaching the course for ½ credit.**

****** **All other learning expectations must be met when teaching the course for 1 credit.**

Horse Science

Standard 1.0

The student will explain the history and development of the horse, describe major breeds according to origin, distinguish breed characteristics and uses, and describe various production factors.

Standard 2.0

The student will specify safety factors to consider when handling, transporting and selecting appropriate tack for horses.

Standard 3.0

The student will evaluate the parts of the digestive system of horses and explain general nutritional standards of horses.

Standard 4.0

The student will evaluate the importance of maintaining a healthy horse; practice techniques of disease prevention and parasite control and illustrate basic first aid.

Standard 5.0

The student will discuss causes of lameness and their symptoms, describe trimming techniques, and determine when a horse has been shod properly.

Standard 6.0

The student will evaluate the parts of the male and female reproductive systems and discuss aspects of a breeding program that develop desirable genetic traits.

Standard 7.0

The student will describe the important factors in selecting a horse for a particular use.

Standard 8.0

The student will describe means and techniques for stabling and training a horse.

Standard 9.0

The student will integrate academic competencies with competencies in horse science.

Standard 10.0

The student will develop premier leadership and personal growth needed for success in horse science.

Course Description:
This course is designed to develop basic understanding of equine handling, health, maintenance, reproduction, selection and management. The course provides students with a fundamental understanding in animal science to prepare them for advanced courses in the animal science sub-cluster.

Standard 1.0

The student will explain the history and development of the horse, describe major breeds according to origin, distinguish breed characteristics and uses, and describe various production factors.

Learning Expectations:
The student will:

1.1	Explain the history of equine species.	½
1.2	Evaluate the uses for different breeds of horses.	½
1.3	Evaluate desirable characteristics for horses.	½

Evidence Standard is Met:
The student will:

- Determine the role horses have played in the lives of humans.
- Recognize the major breeds of horses and their uses.
- Recommend breeding traits that should be seen in various breeds of horses.

Integration/Linkages
Social Studies, Biology, Language Arts, Geography, American History, National Horse Breeder Associations, SCANS (Secretary's Commission on Achieving Necessary Skills)

Sample Performance Tasks:

- Create a timeline showing the development of the horse breeds.
- Prepare breed silhouettes.
- Recommend uses of various breeds.
- Prepare a chart describing the major breeds of horses and their distinguishing features.

Standard 2.0

The student will specify safety factors to consider when handling, transporting and selecting appropriate tack for horses.

Learning Expectations:
The student will:

2.1	Summarize safety procedures for handling and transporting horses.	½
2.2	Summarize techniques used for handling and grooming horses.	½
2.3	Evaluate various types of tack and their uses.	½
2.4	Analyze the health requirements and certificates needed for interstate travel.	½

Evidence Standard is Met:
The student will:

- Explain safe methods of handling horses.
- Label various tack and equipment used in the horse industry.
- Demonstrate proper grooming techniques.
- Recommend appropriate methods of transportation.

Integration/Linkages
Language Arts, Biology, National Horse Breeder Associations, SCANS (Secretary's Commission on Achieving Necessary Skills), Health Education

Sample Performance Tasks

- Groom a live horse.
- Place appropriate tack on a live horse.
- Give presentation on safety precautions used in transporting a horse.
- Establish a portfolio of health certificates needed for transporting a horse.

Standard 3.0

The student will evaluate the parts of the digestive system of horses and explain general nutritional standards of horses.

Learning Expectations:

The student will:

3.1 Analyze parts of the digestive system. ½
3.2 Explain characteristics of feed stuffs.
3.3 Balance rations needed for horses during different stages of its development.

Evidence Standard is Met:

The student will:

- Prepare a chart of the digestive system, describing the function of each organ.
- Determine the nutritional requirements of a horse during different stages of its growth and development.
- Prepare various rations for horses, to meet seasonal nutritional needs.

Integration/Linkages

Mathematics, Biology, Chemistry, Standards of National Horse Breeder Associations, Language Arts, SCANS (Secretary's Commission on Achieving Necessary Skills)

Sample Performance Tasks

- Create a model of the horse digestive system.
- Balance a ration, based on local feed items, and yearly feeding schedule.
- Interpret the nutritional label of commercial feeds.
- Recommend common concentrates and roughage used in equine rations.

Standard 4.0

The student will evaluate the importance of maintaining a healthy horse; practice techniques of disease prevention and parasite control and illustrate basic first aid.

Learning Expectations:

The student will:

4.1 Evaluate methods of disease prevention. ½
4.2 Summarize the characteristics of a healthy horse. ½
4.3 Examine the causes of major horse diseases.
4.4 Summarize the visual symptoms of abnormal health.
4.5 Describe the use of items associated with first aid for horses.
4.6 Differentiate internal and external parasites.

Evidence Standard is Met:

The student will:

- Compare and contrast the characteristics of a healthy and an unhealthy horse.
- Recommend treatments needed for parasite and disease control.
- Discuss symptoms and treatment of major diseases.
- Discuss symptoms and treatment of major parasites.
- Demonstrate the use of first aid equipment in horse care.

Integration/Linkages

Biology, Language Arts, Mathematics, Health Education, SCANS (Secretary's Commission on Achieving Necessary Skills)

Sample Performance Tasks

- Demonstrate appropriate vaccination methods.
- Determine characteristics of healthy horses.
- Complete a chart of a parasite's life cycle.
- Complete a chart on infectious and non-infectious diseases.

Standard 5.0

The student will discuss causes of lameness and their symptoms, describe trimming techniques, and determine when a horse has been shod properly.

Learning Expectations:

The student will:

5.1 Summarize terms associated with foot problems, trimming and shoeing.
5.2 Evaluate the purpose of the internal parts of a foot.
5.3 Evaluate common causes of lameness and means of detecting lameness.
5.4 Assess the use of basic tools in horse management.

Evidence Standard is Met:

The student will:

- Diagram and label parts of the hoof and foot.
- Determine causes of foot problems.
- Discuss detection and treatment of foot problems.
- Recommend tools to be used in managing the health of a horse.

Integration/Linkages

Language Arts, Biology, SCANS (Secretary's Commission on Achieving Necessary Skills)

Sample Performance Tasks

- Recommend equipment needed for shoeing horses.
- Assist a farrier with shoeing a horse.
- Identify different types of horse shoes and their uses.
- Demonstrate methods of correcting foot problems through shoeing and medication.

Standard 6.0

The student will evaluate the parts of the male and female reproductive systems and discuss aspects of a breeding program that develop desirable genetic traits.

Learning Expectations:

The student will:

6.1 Summarize terms associated with fertility, genetics and reproduction. ½
6.2 Evaluate the functions of the parts of male and female reproductive systems. ½
6.3 Evaluate different methods used for breeding horses.

Evidence Standard is Met:

The student will:

- Differentiate terms associated with fertility, genetics, and reproduction.
- Label male and female reproductive systems and describe their functions.
- Recommend breeding systems for various breeders.

Integration/Linkages

Biology, Language Arts, National Horse Breeder Associations, SCANS (Secretary's Commission on Achieving Necessary Skills)

Sample Performance Tasks

- Recommend proper breeding management tools.
- Prepare a breeding chart of male and female reproductive systems.
- Demonstrate artificial insemination techniques.
- Demonstrate proper castration methods of undesirable breeding males.
- Interview a horse breeder on breeding techniques and problems associated with breeding.

Standard 7.0

The student will describe the important factors in selecting a horse for a particular use.

Learning Expectations:

The student will:

7.1 Recognize traits associated with selecting and marketing a horse. ½

7.2 Evaluate the functions of the different parts of the horse. ½

7.3 Describe factors to consider in judging halter and performance classes.

7.4 Orally justify a placing class of horses.

Evidence Standard is Met:

The student will:

- Relate selection and marketing terms to practical application in choosing a horse for use.
- Label the parts of a horse and describe their functions.
- Judge various classes of horses.
- Specify characteristics used in judging the performance of horses.
- Explain tracking and its importance in judging horses.

Integration/Linkages

Language Arts, Biology, Language Arts, National FFA Guidelines for Horse Judging, SCANS (Secretary's Commission on Achieving Necessary Skills)

Sample Performance Tasks

- Judge a class of horses for conformation.
- Give oral reasons for placing a class of horses.
- Identify structural problems of a horse.
- Judge a performance class of horses.
- Judge a halter class of horses.
- Identify markings of a horse.

Standard 8.0

The student will describe means and techniques for stabling and training a horse.

Learning Expectations:

The student will:

8.1 Evaluate methods of stable management.

8.2 Evaluate methods of halter and saddle breaking a horse.

8.3 Evaluate methods of training a horse for various uses.

8.4 Evaluate types of physical facilities and equipment.

8.5 Evaluate different types of holding facilities.

Evidence Standard is Met:

The student will:

- Select desirable gaits for different breeds of horses.
- Differentiate between pleasure and commercial uses of horses.
- Design the components of a working horse facility.
- Design training equipment to be used in a horse facility.

Integration/Linkages

Agricultural Mechanics, Mathematics, Language Arts, SCANS (Secretary's Commission on Achieving Necessary Skills), Biology

Sample Performance Tasks

- Give a presentation for appropriately training a horse.
- Interview a judge of a horse show to determine proper showing and handling techniques.
- Demonstrate correct mounting and dismounting techniques.
- Demonstrate proper halter techniques.
- Demonstrate proper leading techniques.

Standard 9.0

The student will integrate academic competencies with competencies in horse science.

Language Arts:

The student will:

9.1 Present research on eliminating disease and unhealthy conditions in a horse herd.

9.2 Construct and use spreadsheets and databases to keep records on costs and health factors.

9.3 Present research on current topics facing the horse industry.

9.4 Use current technology to assimilate information on horse science. ½

9.5 Use correct grammar in presenting oral and written presentations on horse science. ½

Mathematics:

The student will:

9.6 Use ratios to determine proper feeding requirements.

9.7 Convert from English to metric units of weight, volume and measurement.

9.8 Read and construct graphs, on growth and nutrient intake during the year.

Science:

The student will:

9.9 Diagram the gross anatomy of a horse. ½

9.10 Examine an animal's physiology and determine the functions of different systems. ½

9.11 Utilize the scientific method for solving health and nutritional problems.

9.12 Use nomenclature classification to group animals according to use.

Evidence Standard is Met:

The student will:

- Propose feed needed for an animal.
- Compare animal welfare to animal rights.
- Compare graphs of growth rates of animals.

Integration/Linkages

Social Studies, Biology, Chemistry, Mathematics, Language Arts, SCANS (Secretary's Commission on Achieving Necessary Skills)

Sample Performance Tasks

- Prepare a portfolio, which includes recommendations for matching a horse for a particular use, nutritional information for the horse, and a brochure related to providing a healthy environment for the animal.

Standard 10.0

The student will develop premier leadership and personal growth needed for success in horse science.

Learning Expectations:

The student will:

10.1 Plan and an SAEP, supervised agricultural experience program, related to horse science. ½

10.2 Develop skills necessary to participate in horse related events in the FFA. ½

10.3 Prepare for award programs available in the FFA. ½

Evidence Standard is Met

The student will:

- Complete appropriate records for an SAEP.
- Specify characteristics used for judging classes of horses.
- Complete applications for various awards available through the FFA that are related to horse science.

Integration/Linkages

Language Arts, National FFA Guidelines for Prepared Speaking CDE, career development event, National FFA Guidelines for Horse Judging CDE, National FFA Guidelines for Proficiency Awards and Degrees, SCANS (Secretary's Commission on Achieving Necessary Skills), National FFA Guidelines for Community Education Programs

Sample Performance Tasks

- Complete a portfolio related to an SAE in horse science.
- Judge classes of horses, using appropriate cards and materials.

- Complete a proficiency award on equine science or diversified livestock.
- Complete a State FFA degree and American FFA degree.
- Participate in the FFA Food for America program.
- Participate in the FFA Farm Safety Just 4 Kids program.
- Participate in the America Reads Challenge program.
- Participate in the FFA Partners for a Safer Community program
- Participate in the FFA PALS program.